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CLAIMS

What is claimed is:

1. An apparatus for dispensing a liquid onto a substrate, comprising:

a support for receiving the substrate;

a dispensing head for dispensing the liquid onto the substrate;

a knife ring vertically adjustably mounted beneath said support; and

a vertical adjustment mechanism operably engaging said knife ring for placing said knife ring at selected vertical positions beneath the substrate.

2. The apparatus of claim 1 wherein said vertical adjustment mechanism comprises at least one fluid-actuated ring actuating cylinder.

3. The apparatus of claim 1 wherein said knife ring has a width of about 290 mm.

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4. The apparatus of claim 3 wherein said vertical adjustment mechanism comprises at least one fluid-actuated ring actuating cylinder.

5. The apparatus of claim 2 wherein said at least one fluid-actuated ring actuating cylinder comprises a plurality of fluid-actuated ring actuating cylinders.

6. The apparatus of claim 5 wherein said knife ring has a width of about 290 mm.

7. The apparatus of claim 2 wherein said at least one fluid-actuated ring actuating cylinder is actuated by pneumatic pressure.

8. The apparatus of claim 7 wherein said knife ring has a width of about 290 mm.

9. The apparatus of claim 7 wherein said at least one fluid-actuated ring actuating cylinder comprises a plurality of fluid-actuated ring actuating cylinders.

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10. The apparatus of claim 9 wherein said knife ring has a width of about 290 mm.

11. An apparatus for dispensing a liquid onto a substrate, comprising:

a support for receiving the substrate;

a dispensing head for dispensing the liquid onto the substrate;

a knife ring vertically adjustably mounted beneath said support; and

at least one hydraulic-powered ring actuating cylinder operably engaging said knife ring for placing said knife ring at selected vertical positions beneath the substrate.

12. The apparatus of claim 11 wherein said knife ring has a width of about 290 mm.

13. The apparatus of claim 11 wherein said at least one ring actuating cylinder comprises a plurality of ring actuating cylinders.

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14. The apparatus of claim 13 wherein said knife ring has a width of about 290 mm.

15. A method of preventing backside contamination of a substrate with a liquid while dispensing the liquid onto the substrate, comprising the steps of:

providing a vertically-adjustable knife ring;

positioning the substrate above said knife ring;

vertically adjusting said knife ring wherein said knife ring is disposed at a first gap distance with respect to a backside of the substrate;

dispensing the liquid onto the substrate;

vertically adjusting said knife ring wherein said knife ring is disposed at a second gap distance greater than said first gap distance with respect to the backside of the substrate; and

directing a stream of a rinsing liquid against the backside of the substrate.

16. The method of claim 15 wherein said first gap distance is from about 0.1 mm to about 0.4 mm.

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17. The method of claim 15 further comprising the step of operably connecting at least one ring actuating cylinder to said knife ring and wherein said vertically adjusting said knife ring comprises the step of vertically adjusting said knife ring by operation of said at least one ring actuating cylinder.

18. The method of claim 17 wherein said first gap distance is from about 0.1 mm to about 0.4 mm.

19. The method of claim 16 wherein said second gap distance is from about 1.4 mm to about 1.5 mm.

20. The method of claim 19 further comprising the step of operably connecting at least one ring actuating cylinder to said knife ring and wherein said vertically adjusting said knife ring comprises the step of vertically adjusting said knife ring by operation of said at least one ring actuating cylinder.